

Claims

1. A machine tool (10), particularly for the machining of workpieces, comprising:
  - at least one machining module (12) having at least one spindle (14) with a horizontally oriented spindle axis;
  - at least one clamping module (24) with a horizontally oriented clamping surface that is rotatable around a vertical axis and that is intended for at least one workpiece, said clamping module (24) having means (26) for rigidly coupling to said machining module (12) and said at least one clamping module (24) and said at least one machining module (12) having at least one imaginary mid-plane parallel to the spindle-axis direction; and
  - at least one pallet changing module (28), said pallet changing module (28) being coupled to said clamping module (24) asymmetrically with respect to the mid-plane.
2. The machine tool (10) according to claim 1, characterized in that said clamping module (24) is essentially cuboid and said pallet changing module (28) is coupled to said clamping module (24) in such an off-centre manner as to project over a maximum of two of the vertically oriented lateral faces of the cuboid.
3. The machine tool (10) according to claim 1 or 2, characterized in that said pallet changing module (28) is coupled at an angle of 45° relative to the mid-plane.

4. The machine tool (10) according to any of the preceding claims, characterized in that two machining modules (12, 12') are provided, said machining modules being connected to said clamping module (24) at an angle of 90° relative to one another, said pallet changing module (28) being in an off-centre position relative to each of the imaginary mid-planes which each extend parallel to the spindle axes.
5. The machine tool (10) according to any of claims 1 to 3, characterized in that two machining modules (12, 12') positioned in parallel relative to their spindle-axis directions are provided, one clamping module (24, 24') respectively for each of said machining modules (12, 12') and one pallet changing module (28, 28') respectively for each of said clamping modules.
6. The machine tool (10) according to claim 5, characterized in that said modules (12, 12'; 24, 24'; 28, 28') are positioned symmetrically relative to the intersection between said first and second machining module (12, 12') and/or between said first and second clamping module (24, 24').
7. The machine tool (10) according to any of the preceding claims, characterized in that said machining module (12) is designed as a triaxial machining unit.
8. The machine tool (10) according to any of the preceding claims, characterized in that said machining module (12) comprises at least one tool magazine (22).
9. The machine tool (10) according to any of the preceding claims, characterized in that said clamping module (24) is a turntable.

10. The machine tool (10) according to any of the preceding claims, characterized in that said pallet changing module (28) is adapted to receive at least two pallets.
11. The machine tool (10) according to any of the preceding claims, characterized in that said pallet changing module (28) is designed as a turntable.